

Claims

1. Lithium quinolate.
- 5 2. A method of making lithium quinolate which comprises reacting a lithium alkyl or alkoxide with 8-hydroxy quinoline or substituted 8-hydroxy quinoline.
3. A method of making lithium quinolate as claimed in claim 2 in which a lithium alkyl or alkoxide is reacted with the 8-hydroxyquinoline in the liquid phase.
- 10 4. A method of making lithium quinolate as claimed in claim 3 in which a film of lithium quinolate is deposited onto a substrate.
5. A method as claimed in claim 4 in which the substrate is dipped or otherwise
- 15 coated with a solution of the lithium alkyl or alkoxide to form a film on the surface and then dipped or otherwise coated with 8-hydroxyquinoline and the lithium quinolate film is formed on the substrate surface.
6. A method as claimed in any one of claims 2 to 5 in which the alkyl is ethyl, propyl
- 20 or butyl.
7. A method as claimed in any one of claims 2 to 5 in which the metal alkoxide is an ethoxide, propoxide or a butoxide.
- 25 8. A structure which incorporates a layer of lithium quinolate and a means to pass an electric current through the lithium quinolate layer.
9. 10. An electroluminescent device comprises a conductive substrate which acts as the anode, a lithium quinolate layer and a metal contact connected to the
- 30 electroluminescent layer which acts as the cathode.

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2.126 10. 11. An electroluminescent device as claimed in claim 10 in which the substrate is transparent conductive glass or plastic material.

5 11. 12. An electroluminescent device as claimed in claim 11 in which there is a hole transporting layer deposited on the transparent substrate and the lithium quinolate is deposited on the hole transporting layer.

10 12. 13. An electroluminescent device as claimed in claim 12 in which the hole transporting layer is made of a film of poly(vinylcarbazole), N,N'-diphenyl-N,N'-bis(3-methylphenyl)-1,1'-biphenyl-4,4'-diamine (TPD), polyaniline.

15 13. 14. An electroluminescent device as claimed in any one of claims 10 to 12 in which a dye is included to modify the colour spectrum of the emitted light.

14. 15. An electroluminescent device as claimed in any one of claims 10 to 14 in which the lithium quinolate is mixed with a polyolefin and the amount of lithium quinolate in the mixture is from 95% to 5% by weight of the mixture.

20 15. 16. An electroluminescent device as claimed in claim 16 in which the amount of lithium quinolate is from 25 to 20% by weight of the mixture.

25 16. 17. An electroluminescent device as claimed in any one of claims 12 to 16 in which a hole transporting material is mixed with the lithium quinolate in a ratio of 5-95% by weight of the lithium quinolate to 95 to 5% by weight of the hole transporting compound.

30 17. 18. An electroluminescent device as claimed in any one of claims 12 to 17 in which there is a layer of an electron injecting material between the cathode and the lithium quinolate layer,

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~~18. 18. An electroluminescent device as claimed in any one of claims 12 to 17 in which there is an electron injecting layer mixed with the lithium quinolate~~

5 ~~19. 20. An electroluminescent device as claimed in claim 18 in which the electron injecting layer is a different metal quinolate which will transport electrons when an electric current is passed through it.~~

~~20. 21. An electroluminescent device as claimed in claim 18 in which the electron injecting layer is aluminium quinolate~~

10 ~~21. 22. An electroluminescent device as claimed in claim 12 in which there is a substrate formed of a transparent conductive material which is the anode on which is successively deposited a hole transportation layer, the lithium quinolate layer and an~~
15 ~~electron transporting layer which is connected to a metal anode.~~

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